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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Offerle, et al.

Serial No.: 10/708,676

Group Art Unit: 3683

Filed: 3/18/2004

Examiner: Schwartz, Christopher P.

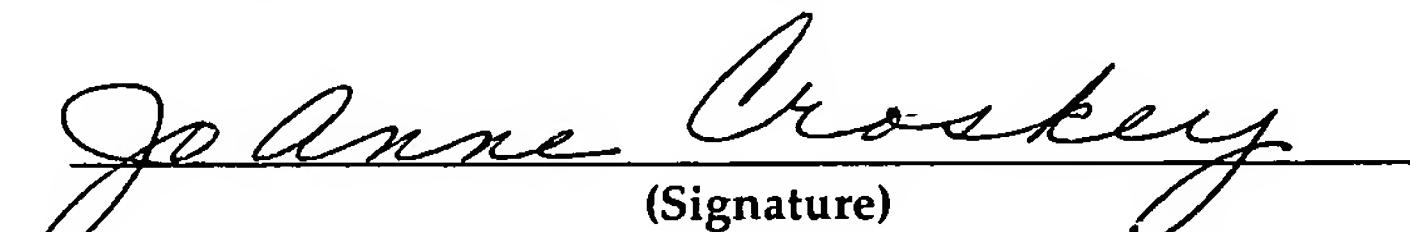
For: METHOD AND APPARATUS FOR MAINTAINING A TRAILER  
IN A STRAIGHT POSITION RELATIVE TO THE VEHICLE

Attorney Docket No.: 81095827

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

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Jo Anne Croskey

  
(Signature)

REPLY BRIEF

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The present Reply Brief is in response to the Examiner's Answer mailed July 13, 2006.

**Claim 1**

In the Examiner's Answer beginning on page 7, line 1, appellants wish to direct the Board to consider that the present invention recites "determining a straight position of the trailer using a trailer sensor *during forward motion of the vehicle*" and that the limitation of "controlling the vehicle to maintain the trailer in the straight position" is described in detail in the specification as being performed by a controller, preferably a microprocessor based controller.

The limitation of "determining a straight position of the trailer using a trailer sensor" also includes the language "during forward motion of the vehicle." This is described in the specification to encompass more than just "a straight alignment" between the towing vehicle and the trailer vehicle as asserted by the Examiner. The present invention determines the straight position of the trailer relative to the vehicle, then uses the sensor information of the determined straight position of the trailer relative to the vehicle in the controller to control the vehicle and maintain the straight position during forward motion of the vehicle. See specifically paragraph [0084] in the spec where it is described that the sensor determines the alignment of the vehicle relative to the trailer, along with several examples of how the determination of relative alignment is accomplished.

The limitation of "controlling the vehicle to maintain the trailer in the straight position" is described in the specification at paragraph [0048] and Figure 3 where the method of controlling is accomplished through a control system having a controller that

may be a centralized controller or a combination of controllers and is microprocessor based. Further support for this argument is found in paragraph [0050] and Figure 3 where the specification describes the controller as receiving information from sensors and again at paragraph [0072] where the controller is described as controlling a safety device and actuators.

Therefore, it is respectfully asserted that the claim language is not unduly broad and is consistent with what is sufficiently defined in the specification, particularly when taken in context with the claim as a whole.

The Mizusawa reference uses a camera system to check alignment and displays an image, but does not teach or suggest using sensor information in a controller for controlling the forward motion of the vehicle and the trailer. Furthermore, it is respectfully asserted that Mizusawa is directed to a method for reversing a vehicle in order to align the vehicle with the hitch and therefore does not teach or suggest the need to maintain the straight position of the trailer relative to the vehicle during forward motion of the vehicle as claimed in the present invention.

The McGregor reference teaches a well known method of aligning a tow vehicle hitch with a trailer connection and discloses a control unit to improve maneuverability, but it is respectfully asserted that the reference does not teach or suggest determining a straight position of the trailer relative to the vehicle during forward motion as taught by the present invention. Even in combination with Mizusawa, the references teach aiding an alignment of the tow vehicle and the trailer at the hitch connection and neither

reference teaches or discloses determining the straight position of the trailer with respect to the vehicle to control the vehicle in its forward motion.

The Appellants therefore respectfully request the Board to reverse the Examiner with respect to claim 1. Claims 2-16 stand or fall together with claim 1.

### **Claim 32**

Claim 32 is directed to a locating plate having a locating hole on the trailer. The McGregor and Mizusawa do not teach or suggest the use of a locating hole on a locating plate. It is respectfully asserted that the locating plate having a locating hole is not an obvious modification as asserted by the Examiner. The Mizusawa and McGregor references teach aligning a ball hitch to a connector and do not teach or suggest aligning a locating plate having a locating hole on the trailer relative to the vehicle. As shown in Figure 5 the locating plate 177 and locating hole 178 are not collocated with the ball and hitch connection. Using a locating plate having a locating hole instead of the ball/hitch arrangement that is taught in the prior art, provides the advantage of avoiding potential damage to the trailer/hitch connection caused by the ball and hitch not being exactly aligned before connection is attempted. By aligning the locating plate having a locating hole on the trailer, it is easier to determine the exact alignment of the ball and hitch before connection takes place.

Appellants respectfully request the Board to reverse the Examiner with respect to claim 32. Claims 33-35 stand or fall together with claim 32.

**Claim 17**

As indicated in the Appeal Brief filed May 3, 2006, the secondary steering actuator may comprise many things, including a turn signal actuator, a push button, or the like. However, the present invention claims a secondary steering actuator *that generates a signal indicative of a desired trailer turn direction*. The signal is provided to the controller and used, in conjunction with other sensor inputs, to control the vehicle and maintain the vehicle in the desired trailer turn direction.

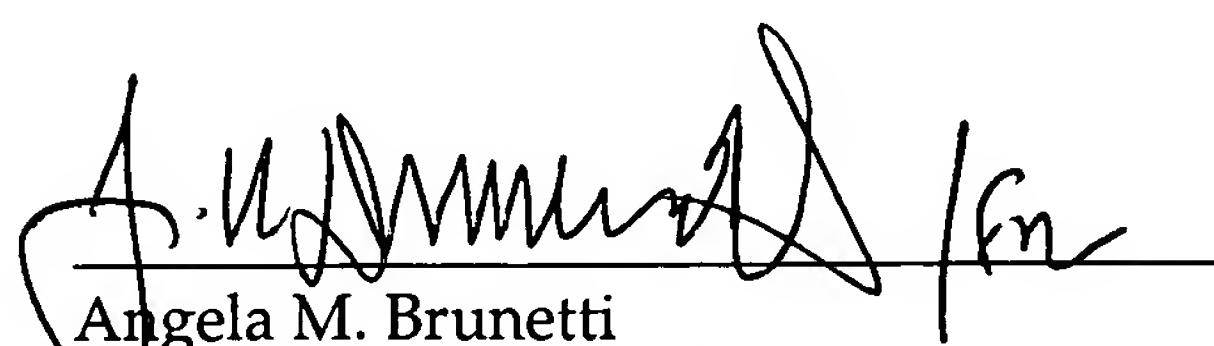
The references cited by the Examiner do not teach or disclose using the input of a secondary steering actuator that generates a signal indicative of a desired turn direction as claimed by the Appellants. It is asserted that no teaching or suggestion for this limitation can be found in either the McGregor or the Mizusawa references as they are directed to detached vehicles in the process of being coupled together. Furthermore, the Gerum reference teaches using brakes to stabilize the vehicle to prevent jackknifing, and no secondary steering actuator is taught or suggested.

As indicated in the specification and in the claim the secondary steering actuator is for generating a signal that indicates the desired trailer turn direction. The Examiner's example of the sensor-brake steering arrangement taught by McGregor that increases stability of the vehicle does not teach or suggest using a secondary steering actuator coupled to a controller to maintain the vehicle in the desired trailer turn direction. Therefore, Appellants respectfully request the Board to reverse the Examiner with respect to claim 17. Claims 18-31 stand or fall together with claim 17.

Appellants believe that each of the claims remaining in this case are allowable and requests the Board to reverse the Examiner's finding of unpatentability.

Respectfully submitted,

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